



DOE ENERGY STORAGE SYSTEMS RESEARCH PROGRAM ANNUAL PEER REVIEW

November 2-3, 2006 Washington Marriott Hotel, Washington, DC (USA)

AGENDA

Thursday, November 2, 2004

7:45 AM	Continental Breakfast
8:30	Welcome and Overview - Dr. Imre Gyuk, DOE
8:40	DOE Perspective – DOE
9:00	ESS Program Overview – John Boyes, Sandia National Laboratories
9:20	NAS Battery Performance at Charleston, WV — Ali Nourai, AEP Corp. (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).
9:40	Evaluation of the Kauai Island Utility Co-operative System for Energy storage Potential — Abbas Akhil, Sandia National Laboratories (Funded by the Kauai Island Utility Co-0p).
10:00	<u>lowa Stored Energy Plant</u> – Bob Haug, Iowa Stored Energy Plant Agency (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).
10:20	Break
10:40	Boeing Superconducting Flywheel Development – Philip Johnson, Boeing (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).
11:00	Bipolar Nickel Metal Hydride Battery Development and Testing – James Landi, EEI (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).
11:20	Nanophase Electrode Materials for Fast Rate Li-based Energy Storage Devices – Amit Singhal, NEI Corporation (Funded by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through the Small Business Technology Transfer (STTR) program and managed by Sandia National Laboratories (SNL).





11:40 Evaluation of Lead Carbon Devices for Energy Storage – Ben Craft,

MeadWestVaco (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).

12:00 Lunch on Your Own

1:20 PM <u>Laboratory-scale FACTS Controller Development</u> – Dr.

Mariesa Crow, Univ. of Missouri, Rolla (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).

- 1:40

 100kW Low Cost Energy Storage Inverter Larry Rinehart, Rinehart Motions (Funded by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through the Small Business Innovation Research (SBIR) program and managed by Sandia National Laboratories (SNL).
- 2:00 ETO Light Power Converter for FACTS & Energy Storage

<u>Applications</u> – Dr. Alex Huang, NC State Univ. (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).

2:20 Break

2:40 A High-efficiency Compact SiC-based Power Converter System – Dr.

Timothy Lin, Aegis Technology (Funded by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through the Small Business Technology Transfer (STTR) program and managed by Sandia National Laboratories (SNL).

3:00 Optically isolated, High-voltage, IGBT-based Inverter for DER

<u>Applications</u> – Paul G. Duncan, Airak (Funded by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through the Small Business Technology Transfer (STTR) program and managed by Sandia National Laboratories (SNL).

3:20 High Temp and High Power Density SiC Power Electronic Converters

- Dr. Alexander B. Lostetter, Arkansas Power Electronics Int'l, Inc. (Funded by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through the Small Business Innovation Research (SBIR) program and managed by Sandia National Laboratories (SNL).

3:40 – 5:00 Mini-Meeting – organized by ESA

5:00 – 7:00 Reception – hosted by ESA





Friday, November 3, 2004

- **8:20** <u>EESAT 2007 Information</u> Georgianne Peek, Sandia National Laboratories
- 8:30 <u>Ultracapacitor EnergyBridge™ UPS for Palmdale Water District</u>

- Chris McKay, Northern Power (This project is part of the Energy Storage Collaboration between the California Energy Commission (CEC) and the Energy Storage Systems Program of the U.S. Department of Energy (DOE/ESS) and managed by Sandia National Laboratories (SNL).

- 8:50

 Flywheel-based Frequency Regulation Demonstration Projects for CEC, NYSERDA and DOE Jim Arseneaux, Beacon Power (This project is part of the Energy Storage Collaboration between the California Energy Commission (CEC), the NY State Energy Research & Development Authority (NYSERDA), and the Energy Storage Systems Program of the U.S. Department of Energy (DOE/ESS) and managed by Sandia National Laboratories (SNL).
- 9:10 <u>Design of the FESS 20 MW Frequency Regulation Plant</u> Rob Rounds, Beacon Power (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).
- 9:30 Long Island Bus Sodium Sulfur Battery Storage Project Guy Sliker and Yan Kishinevsky, NY Power Authority (This project is part of the Joint Energy Storage Initiative between the New York State Energy Research and Development Authority (NYSERDA) and the Energy Storage Systems Program of the U.S. Department of Energy (DOE/ESS), and managed by Sandia National Laboratories (SNL).
- 9:50 Break
- 10:20

 NYSERDA/DOE Energy Storage Initiative Data Management and
 Analysis Jeffrey Lamoree, EnerNex Corp. (This project is part of the Joint Energy Storage Initiative between the New York State Energy Research and Development Authority (NYSERDA) and the Energy Storage Systems Program of the U.S. Department of Energy (DOE/ESS), and managed by Sandia National Laboratories (SNL).
- 10:40

 Data Management for CEC/DOE Energy storage Demonstration

 Project Doug Dorr, EPRI PEAC Corp. (This project is part of the Energy Storage
 Collaboration between the California Energy Commission (CEC) and the Energy Storage Systems
 Program of the U.S. Department of Energy (DOE/ESS) and managed by Sandia National
 Laboratories (SNL).
- 11:00 <u>Testing and Evaluation of Energy Storage Devices</u> Tom Hund, Sandia National Laboratories (Funded by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS).
- 11:20 <u>Lead-acid Batteries in Hybrid Electric Vehicles</u> Pat Moseley, ILZRO (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL).





11:40 Lunch on your own 1:00 PM Overcoming Transmission Constraints: Energy Storage and Wyoming Wind Power- Mindi Farber de Anda, SAIC (Funded by the DOE Energy Storage Systems Program (DOE/ESS) as a State Energy Grant). 1:20 **Hybrid Generation Simulator** – David Trujillo, Sandia National Laboratories (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL). 1:40 Modular Energy Storage Benefit and Cost for Three Emerging Value **Propositions** – Susan M. Schoenung, Longitude 122 West, Inc. & James M. Eyer, Distributed Utility Associates – (Funded in part by the Energy Storage Systems Program of the U.S. Department Of Energy (DOE/ESS) through Sandia National Laboratories (SNL). What's New? 2:00 **Sprint**, Kevin Kinney **Emerson Network Power**, Paul Misar 2:20 **CONCLUSIONS** – Dr. Imre Gyuk and John Boyes